

REMARKS/ARGUMENTS

Reconsideration of this application in light of the above amendments and following comments is courteously solicited.

The abstract has been amended so as to comply with MPEP Section 608.01(b).

With regard to the drawings, Applicants submit herewith Replacement Sheets in compliance with 37 C.F.R. 1.121(d) wherein Figures 9 and 10 have been designated with the legend Prior Art. The examiner is requested to approve the drawings.

Claim 2 was rejected under 35 U.S.C. 112, first paragraph. The examiner indicates that there is not sufficient description for the so-called "passive vessel cooling system" as claimed in dependent claim 2. As to how this rejection applies to claim 2 as amended herein, it is respectfully traversed.

The examiner's attention is drawn to Page 2 lines 10-22, Page 3, lines 12-24, Page 27 lines 7-12, and Page 29, lines 2-9 of the instant specification. It is submitted that this portion of Applicants' specification clearly supports the enablement requirement of 35 U.S.C. 112, first paragraph. Accordingly, the examiner's rejection of claim 2 under 35 U.S.C. 112, should be withdrawn.

The examiner rejected previously submitted claims 1-5 under 35 U.S.C. 112, second paragraph. Claims 1, 2, and 5 have been amended so as to obviate the examiner's rejection of same under

35 U.S.C. 112. Accordingly, it is believed that the examiner's rejection of same is rendered moot.

The examiner rejected previously submitted claims 1-5 under 35 U.S.C. 102(b) as being anticipated by Hundal et al. '270. Applicants respectfully request the examiner to reconsider this rejection. In accordance with the present invention, the sodium-sodium heat exchanger is deposited at a position higher than a liquid level of the sodium in the cold pool under normal steady-state conditions so as not to come in contact with the cold pool. This feature is not disclosed by the Hundal et al. reference. In Hundal et al., there is no equivalent structure to the sodium-sodium heat exchanger located in the position as claimed in independent claim 1. Accordingly, the examiner's rejection of claim 1 under 35 U.S.C. 102 as being anticipated is improper and should be withdrawn. Newly added dependent claim 9 further defines the sodium-sodium heat exchanger and the function thereof. Claim 9 is likewise not shown, disclosed nor rendered obvious by the teachings of the Hundal et al. '270 document.

The examiner further rejected independent claim 1 under 35 U.S.C. 103 as being anticipated by any one of Sharbaugh, Schenewerk and Jogand. Applicants respectfully traverse these rejections for the following reasons.

According to Sharbaugh, the heat exchangers (5) are being

submerged in sodium differently from the present invention.

Besides, Sharbaugh's invention has a technical feature that the flow of sodium is circulated internally in the reverse direction with that of normal reactor condition due to buoyancy forces created by abnormally much heat generated in the reactor core during transient conditions that the primary pumps are shutdown. Accordingly, Sharbaugh's invention is different from the present invention.

According to Schenewerk and Jogand, during normal operation, coolant does not flow into plenums due to the pressure of gas charged in the plenums where the heat exchangers are mounted. In abnormal operation, the gas is discharged externally in order to draw the coolant into the plenums, thus removing decay heat by means of heat exchangers. Accordingly, they have different configurations from the present invention and further do not have the completely passive concept of the present invention.

Newly presented dependent claim 9 further defines the sodium-sodium heat exchanger of the present invention and these features are not shown or disclosed in any of the three patents discussed above, that is, '667, '194 or '192.

In light of the foregoing, it is submitted that all of the claims as pending patentably define over the art of record and an early indication of same is respectfully requested.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,

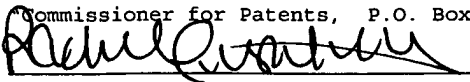
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I, Rachel Piscitelli, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:
"Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on January 13, 2006.



Amendments to the Drawings:

The attached sheet of drawings includes changes to Figs. 9 and 10. These sheets, which include Figs. 9 and 10, replace the original sheets including Figs. 9 and 10. In Figures 9 and 10, Prior Art has been added.

Attachment: Replacement Sheet (2)
Annotated Sheet (2)

PRIOR ART

FIG. 9

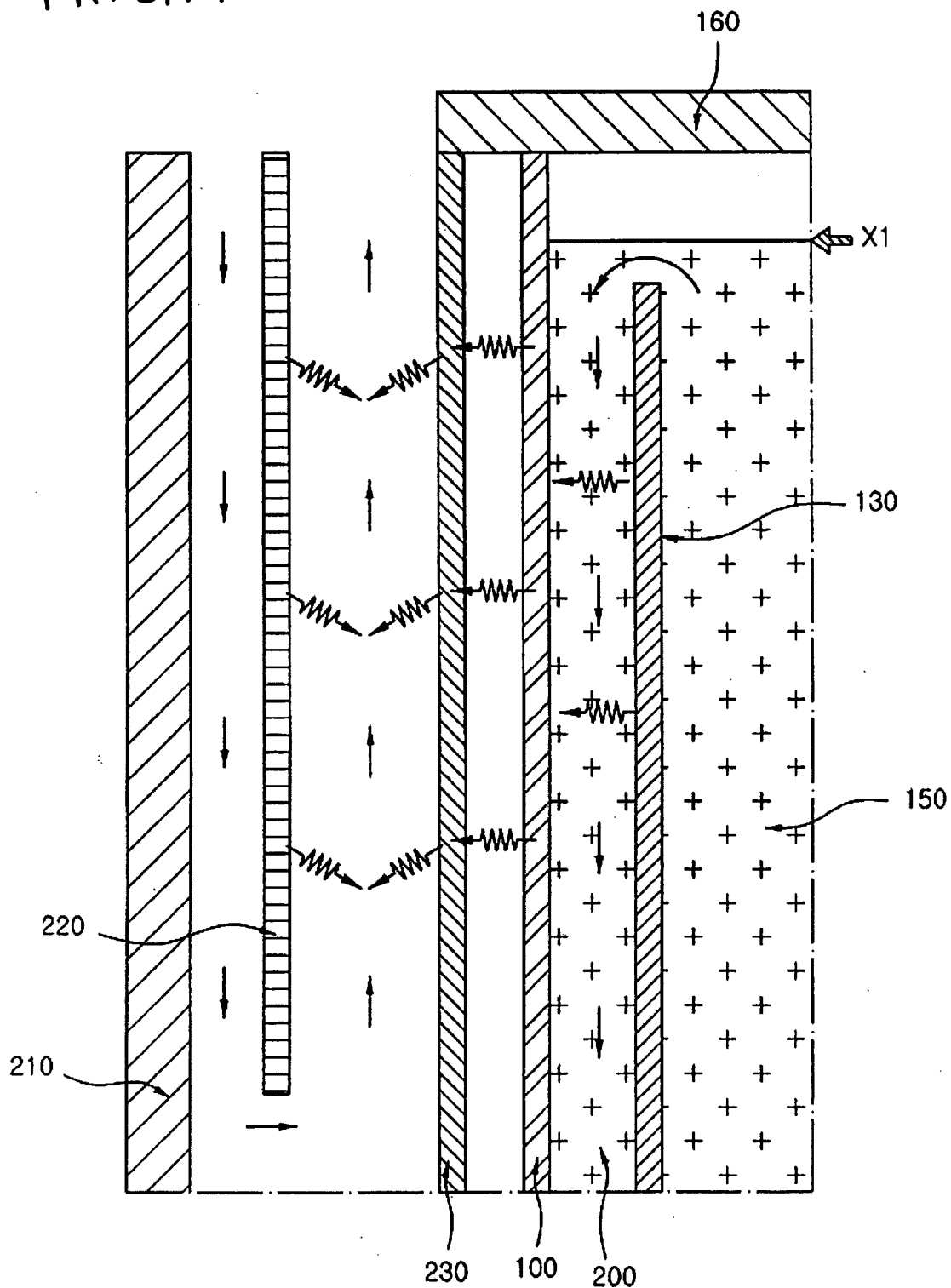


FIG. 10

PRIOR ART

